

(k) When required by paragraph (j) of this section, a third gyroscopic bank-and-pitch indicator (artificial horizon) that:

- (1) Is powered from a source independent of the electrical generating system;
- (2) Continues reliable operation for a minimum of 30 minutes after total failure of the electrical generating system;
- (3) Operates independently of any other attitude indicating system;
- (4) Is operative without selection after total failure of the electrical generating system;
- (5) Is located on the instrument panel in a position acceptable to the Administrator that will make it plainly visible to and usable by each pilot at his or her station; and
- (6) Is appropriately lighted during all phases of operation.

[Doc. No. 6258, 29 FR 19205, Dec. 31, 1964, as amended by Amdt. 121–57, 35 FR 304, Jan. 8, 1970; Amdt. 121–60, 35 FR 7108, May 6, 1970; Amdt. 121–81, 36 FR 23050, Dec. 3, 1971; Amdt. 121–130, 41 FR 47229, Oct. 28, 1976; Amdt. 121–230, 58 FR 12158, Mar. 3, 1993; Amdt. 121–251, 60 FR 65929, Dec. 20, 1995; Amdt. 121–262, 62 FR 13256, Mar. 19, 1997]

§ 121.306 Portable electronic devices.

(a) Except as provided in paragraph (b) of this section, no person may operate, nor may any operator or pilot in command of an aircraft allow the operation of, any portable electronic device on any U.S.-registered civil aircraft operating under this part.

(b) Paragraph (a) of this section does not apply to—

- (1) Portable voice recorders;
- (2) Hearing aids;
- (3) Heart pacemakers;
- (4) Electric shavers; or

(5) Any other portable electronic device that the part 119 certificate holder has determined will not cause interference with the navigation or communication system of the aircraft on which it is to be used.

(c) The determination required by paragraph (b)(5) of this section shall be made by that part 119 certificate holder operating the particular device to be used.

[Doc. No. FAA–1998–4954, 64 FR 1080, Jan. 7, 1999]

§ 121.307 Engine instruments.

Unless the Administrator allows or requires different instrumentation for turbine engine powered airplanes to provide equivalent safety, no person may conduct any operation under this part without the following engine instruments:

- (a) A carburetor air temperature indicator for each engine.
- (b) A cylinder head temperature indicator for each air-cooled engine.
- (c) A fuel pressure indicator for each engine.
- (d) A fuel flowmeter or fuel mixture indicator for each engine not equipped with an automatic altitude mixture control.
- (e) A means for indicating fuel quantity in each fuel tank to be used.
- (f) A manifold pressure indicator for each engine.
- (g) An oil pressure indicator for each engine.
- (h) An oil quantity indicator for each oil tank when a transfer or separate oil reserve supply is used.
- (i) An oil-in temperature indicator for each engine.
- (j) A tachometer for each engine.

(k) An independent fuel pressure warning device for each engine or a master warning device for all engines with a means for isolating the individual warning circuits from the master warning device.

(l) A device for each reversible propeller, to indicate to the pilot when the propeller is in reverse pitch, that complies with the following:

(1) The device may be actuated at any point in the reversing cycle between the normal low pitch stop position and full reverse pitch, but it may not give an indication at or above the normal low pitch stop position.

(2) The source of indication must be actuated by the propeller blade angle or be directly responsive to it.

§ 121.308 Lavatory fire protection.

(a) Except as provided in paragraphs (c) and (d) of this section, no person may operate a passenger-carrying airplane unless each lavatory in the airplane is equipped with a smoke detector system or equivalent that provides a warning light in the cockpit or provides a warning light or audio warning